### I. Project Description

The Endeavor Teacher Certificate Project (ESTCP) is a national Fellowship project for in-service, preservice and alternative-route teachers. The project awards over 200 Fellowships over a five year grant lifetime. More than half of the NASA Endeavor Fellows serve underrepresented student populations, engaging them in NASA-related STEM content and career possibilities in the STEM areas as a result of their ESTCP experiences. ESTCP Fellows are selected by a diverse group of science education professionals and represent the 50 states, Puerto Rico and the U.S. Territories.

Fellows are required to complete a series of online courses and individualized Action Research projects. Courses include cutting-edge content and are based upon NASA content from all mission directorates and the infusion of "STEM pedagogical strategies" and educational materials. Fellows also engage in a Leadership Distinction project to promote systemic change within their school system, their region and state.

Endeavor Fellows are awarded a NASA Endeavor Certificate in STEM Education from Teachers College, Columbia University, with whom Endeavor partners. Columbia is the affiliation of a number of the Endeavor course instructors, as well as the coordinators of educational research that was initiated during Year II. In addition fifteen (15) graduate credits are awarded to each Fellow as each earns their STEM Certificate and come from a regionally-accredited partner in higher education.

Endeavor offers workshops for science teacher instructors in colleges of education to provide guidance and expertise about the implementation of STEM strategies in the classroom. The sessions guide the incorporation and delivery of NASA content in Methods and Practicum courses for pre-service and alternate-route educators.

Endeavor establishes cooperative dialogues with state departments of education to advance the opportunity for Fellows to apply credit for Endeavor courses toward state certification requirements.

### **II. Project Goals**

Two primary ESTCP goals directly support two of the objectives of the NASA Education Framework Outcome Two.

- Contribute to the development of a highly qualified educator workforce knowledgeable in NASA-related STEM content, proficient in effective instructional delivery models that are based upon research-based best practices, and pro-active in STEM system change within their respective schools, regions and states.
- 2. Engage K-12 students in NASA-related STEM activities and experiences that positively influence their academic performance and interest in STEM careers through the Endeavor Fellows' classrooms or those of teachers they have trained.

### **III. Project Benefit to Outcomes**

Endeavor's goals contribute to achievement of NASA Education's Outcome 2 – Elementary and Secondary Education. Specifically, Endeavor advances the following Goals and Objectives.

### Goal 1/ Objective 2.2.; Educator Professional Development – Long Duration

The Endeavor professional development model is designed to create a national cadre of 200+ Endeavor Fellows who demonstrate leadership in use of NASA-related STEM content within their classrooms and in educator workshops at the district, regional and state levels.

### Goal 2/ Objective 2.4; Student Involvement

Throughout their individualized PD, Fellows explore how they will incorporate the content and best practices in their respective classes. The required Action Research Plan and Methods in STEM Education course require Fellows to apply and evaluate delivery of the content and instructional methods.

### **IV. Project Accomplishments**

### Overview Status of Cohort I and Cohort II

- 1. The ESTCP has recruited and selected 80 Cohort I & II Fellows representing 35 states, the District of Columbia and Puerto Rico.
- 2. Cohort I Fellows serve as mentors to Cohort II Fellows.
- 3. 13 Cohort I Fellows completed all requirements and have been awarded their Certificate of STEM Education. 24 Fellows are expected to receive their Certificate by December 31, 2010.
- 4. All Cohort II Fellows, who began in January 2010, have completed a minimum of two courses.

### **Status of Recruitment**

The comparison chart below of the Teacher Recruitment and Selection of Fellows illustrates the demographics for Cohort I and Cohort II and demonstrates growth in the number of applicants and increased reach to targeted populations.

In addition, note that Cohort II included 6 Fellows, all elementary teachers, sponsored by a school district in Pennsylvania.

|  | Cohort I | Cohort II | Cohort III  |
|--|----------|-----------|---|
| Applications   | 195      | 317       | 378   |
| Applications fully completed   | 94       | 122       | 170   |
| NASA Endeavor Fellows  | 40       | 46        | 45 (anticipated),plus<br>some additional<br>sponsored Endeavor<br>Fellows |
| Dropped Endeavor Fellows   | 3*       | 0         |   |
| Inactive Endeavor Fellows  | 0        | 3**       |   |
| States Represented by NASA Endeavor Fellows (completed applications) | 13 + DC  | 23 + PR   | 40 + DC + PR  |

| NASA Endeavor Fellows       |          |         |    |
|-----------------------------|----------|---------|----|
| # Inservice/Pre-service/Alt | 40/0     | 35/3/2  | NA |
| Route                       |          |         |    |
| # Urban/Suburban/Rural      | 16/14/10 | 24/5/11 | NA |
| # Title I Schools (64%)     | 24       | 23      | NA |
| Elementary/Middle/High      | 21/13/6  | 12/16/8 | NA |
| School                      |          |         |    |
| NASA Endeavor Summer        | 1        | 5       |    |
| Technical Experiences       |          |         |    |

### \*Dropped NASA Fellows:

- 1. Retired due to 99 year-old mother needing care
- 2. Lost job, not teaching, pursing Masters in Mathematics
- 3. Lost job, not teaching, military

### \*\*Inactive NASA Fellows:

- 1. Lost job, budget cuts
- 2. Day-to-day demands in lowest performing school.

### **Endeavor Fellows Recognitions/ Awards/ Promotions**

43 Endeavor Fellows have experienced career changes, receipts of awards, special recognition and other accomplishments as a result of their Endeavor Fellowship. Appendix A provides details of for each. All information provided has come from self-reporting.

### **Online Courses**

Staff and faculty of Teachers College, Columbia University, whose doctoral work is in science education, are instructors for a number of of Endeavor's online courses. Additionally, the Endeavor co-PI, Meghan Marrero, earned her doctorate from Columbia, and teaches as an Adjunct Assistant Professor. These instructors deliver blended synchronous/asynchronous courses to Fellows and assist them in implementing NASA content, including data and educational materials, into their classrooms.

Endeavor currently, in 2010, offers 18 online courses integrating content representing all NASA Mission Directorates. Fellows select courses they believe will be most beneficial in building a knowledge base related to their discipline and will increase their proficiency in proven instructional delivery methods.

Feedback, both anecdotal and formal, documents that Endeavor courses and its supplemental experiences have motivated Fellows to change their instructional delivery of science to include NASA-related STEM materials.

The chart below shows highest enrollment has been in 4 courses. The Methods and Action Research courses are required. An applied math course, <u>Math Connections to STEM</u> was developed and added in 2010. This applied math class integrates math with science and engineering. It is a snapshot of how Endeavor courses align with NASA Mission Directorates, of enrollment numbers, and some examples of correlated NASA data utilized in the courses.

| Course Title   | NASA Mission Directorate (MD) Content Covered:SMD-Science MDESMD-Exploration Systems MDSOMD-Space | Sample NASA Data<br>Sets Used by<br>Teachers      | 2010<br>Approximate<br>Enrollment        | STEM<br>Disciplines  |
|--|---|---|--|--|
|  | Operation MDARMD-Aeronautics  |   |  |  |
| 4.5.1.1.1.1  | Research MD   |   | = U 2222 (22)                            | o .  |
| 1. Exploring Mars: A New Twist on Earth Science                                  | ESMD<br>SMD-Space/Earth   | MOC; Odyssey;<br>Exploration Rovers;<br>MRO       | Fall 2009 (20)<br>Not offered in<br>2010 | Earth Science Physical Science Technology                          |
| 2. Physical Science in Motion: Classroom Applications                            | ARMD  | Various simulation<br>and model data;<br>Kelper   | 10                                       | Physical<br>Science<br>Technology                                  |
| 3. Life with Earth<br>Science: <i>Real Time</i><br><i>Animal Migration</i>       | SMD-Space/Earth   | SeaWifs; MODIS<br>(NDVI); Aqua;<br>GOES;          | Not offered in 2010                      | Earth Science<br>Life Science<br>Technology                        |
| 4. The "E" in STEM:<br>Meaningful Content<br>for Engineering                     | ESMD; SOMD SMD-<br>Space/Earth ARMD   | Any and All                                       | 15                                       | Engineering<br>Technology  |
| 5. Life with Marine<br>Science: Real Time<br>Marine Animal<br>Tracking           | SMD-Space/Earth   | Altimeter<br>(Topography);<br>AMSR, MODIS         | 10                                       | Earth Science<br>Life Science<br>Technology                        |
| 6. Humans in Space: Preparing for Moon, Mars, and Beyond                         | ESMD<br>SOMD  | MOLA<br>Clementine                                | 15                                       | Life Science<br>Technology   |
| 7. Lessons from the<br>Ocean: Science on<br>the Water Planet                     | SMD–Earth, Physical &<br>Life   | SeaWifs; Aquarius;<br>GOES; Aqua,<br>MODIS        | 25                                       | Earth Science Life Science Physical Science Technology             |
| 8. Reading and Writing in the Science Classroom                                  | N/A   | N/A   | 10                                       | N/A  |
| 9. NASA's Astro-<br>Venture with<br>Astrobiology: Is<br>There Life Out<br>There? | ESMD<br>SMD-Space/Earth   | Mars Global<br>Surveyor, COROT<br>Space Telescope | 8  | Earth Science<br>Life Science<br>Physical<br>Science<br>Technology |

| 10. NASA's Tracking a Solar Storm: Science of the Sun                                 | SMD-Space/Physical                    | GOES; STEREO;<br>ACE; SoHo                                     | Fall 2009 (10)<br>Not offered in<br>2010 | Earth Science<br>Physical<br>Science<br>Technology                             |
|---|---------------------------------------|--|--|--|
| 11. Weather Data<br>Learning Center<br>(WDLC)   | Mathematics<br>SMD-Space/Earth        | GOES, AVHRR  | 10                                       | Earth Science<br>Mathematics<br>Technology                                     |
| 12. Physics for True<br>Beginners: <i>Earth,</i><br><i>Moon &amp; Space</i>           | ESMD<br>SMD-Space<br>SOMD             | Hubble; Spitzer;<br>LRO; Apollo;<br>Chandra                    | 10                                       | Physical<br>Science<br>Technology  |
| 13. NSF SPRINTT Student Polar Research-IPY National Teacher Training [Climate Change] | SMD-Earth                             | Landsat, AVHRR;  | 5  | Earth Science Life Science Physical Science Technology                         |
| 14. NASA-sponsored<br>Project 3D-VIEW   | SMD-Earth/Space                       | Custom 3D NASA<br>WorldWind;<br>MODIS; Landsat;<br>ASTER; DEM; | 10                                       | Earth Science Life Science Physical Science Technology                         |
| 15. Math Connections to STEM  | SOMD; ESMD; SMD-<br>Earth/Space       | IMAGE; GOES;<br>POES;<br>Mariner; ISS;<br>ORION                | 10                                       | Mathematics<br>Science<br>Technology   |
| 16. Independent<br>Study  | Sumer Research<br>Experiences         | Any and All  | 6  | Varies   |
| 17. Methods of<br>Applied Science<br>Education  | ESMD; SOMD SMD-<br>Space/Earth ARMD   | Any and All  | 40                                       | Earth Science Life Science Physical Science Mathematics Engineering Technology |
| 18. Action Research in the Science Classroom  | ESMD; SOMD; SMD-<br>Space/Earth; ARMD | Any and All  | 35                                       | Earth Science Life Science Physical Science Mathematics Engineering Technology |

### **Partnerships with State DOEs and Educational Organizations**

Within the first year, Endeavor pro-actively sought to gain recognition of coursework from State Departments of Education in Maine, Virginia and Florida. Adams State College in Alamosa, Colorado was working with Endeavor's accreditation consultant to create a Master's Degree program focused on Endeavor coursework. Dialogue with the University of West Florida and Teach for America was initiated.

During Endeavor's Year II, progress with these partnerships was placed on hold due to budgetary concerns. Endeavor's Performance Plan for Year III reinstates moving forward on these objectives and sets quarterly milestones. A summary of Year I's accomplishments follows.

### Maine

- Courses apply toward certification in general physical or biological sciences
- Methods for STEM Education course applies toward secondary science methods requirement.

### Florida

• Fellows lead state-wide Lesson Study Initiatives /other professional development programs.

### **Virginia**

• Courses apply toward certification renewal professional development hours.

### Adams State College

Due to the fact that Colorado is part of a consortium of 17 states that does not allow outside groups to provide greater than 50% of coursework within Masters Degree Programs, as of April 2010, Endeavor has ceased to co-develop the Masters Degree with Adams State College. However, Adams State does award graduate credit for Endeavor courses.

### University of West Florida

Endeavor content courses count toward a Masters in Curriculum and Instruction.

### Teach for America

Teach for America decided their policy currently requires their professional development must be provided completely in-house. This decision terminated dialogue with Endeavor at this time.

### V. Project Lifecycle Objectives and Progress from FY09 and FY10

In addition to contributing to the NASA Education Outcomes, The Endeavor Science Teaching Certification Project set forth 14 Project Lifecyle Objectives. A review listing of those objectives and the progress of Year I and Year II toward achievement of those objectives is provided.

### 14 Project Lifecycle Objectives and Snapshots of Progress

- Receive over 2000 applications
  - -397 completed applications (incl. teacher educator/pre-service teams in Cohort III)
  - -900 applications initiated
  - —86 participating through 2010
  - -13 earned STEM Certificates (through Summer 2010)
  - —38 are elementary educators; 56 are middle school/secondary educators; 3 are preservice teacher educators; 4 are preservice or alternate-route students
- Fund 200+ Fellowships representative of all 50 states, Washington DC, Puerto Rico and U.S. Territories
  - —126 Fellowships as of December 10, 2010
  - -40+ states, DC and Puerto Rico by December 10, 2010
- 50-85% of Fellows serve underrepresented student populations
  - -64% Title I educators
  - —All school setting types, however, are well-represented
- 15-20% of Fellows represent pre-service, higher education partnerships
  - -Cohort I, II (5%)
  - —Increased emphasis in Cohort III with new teacher educator/pre-service teams
- o Improve Fellows pedagogical content knowledge in STEM disciplines
  - -100% of Fellows indicated Endeavor courses contribute to their professional growth
  - -Many Fellows lead Endeavor-based educator workshops
- o Fellows integrate NASA-related content in their classes
  - -100% of Fellows indicated plans to implement Endeavor content in their instruction
- Increase K-12 student interest in STEM and STEM careers
  - -Year III initial results will be shared in Year III
- o NASA-related content and educational materials, representing the four Mission
  - −18 courses as of 2010 include content representing all Mission Directorates

- Endeavor assists educators in earning/maintain STEM credentials in each of the 50
   States through cooperation with the state Departments of Education
- Fellows have the opportunity to apply for NASA Summer Technical Experiences at NASA Centers.
  - —6 have completed summer experiences
- Fellows complete an Action Research in Science Education that analyzes and reports on a research project within their respective classrooms.
  - —16 developed and completed projects
- Fellows earn a Leadership Distinction on their Certificate by demonstrating their application of Endeavor experience to the district, regional or state level.
  - Elevated to a requirement beginning with Cohort II
- ESTCP establishes partnerships with higher education instructors of pre-service educators that will include NASA Content Workshops for Teacher Educators.
  - —3 were selected in 2010
  - —At minimum of 6 are to be elected for 2011
- High number of Matching Fellowships sponsored by a school district or a state
  - —6 Sponsored Endeavor Fellows

### VI. Lessons Learned

### **Adjustment of Course Schedules**

Endeavor Fellows have progressed well within the program and remain involved after graduating. However, based upon experience and evaluation with Cohort I, the Endeavor Project Team instituted a strategy to better track and pace their Fellows toward completion of their STEM Certification. Realizing that teachers generally elect to take 1 or 2 courses per semester, the courses now all begin relatively early during a semester. This spreads out the demand of time on the educator at any one point within the semester and enables time for more discussion among participants, and on-time completion of assignments. The Endeavor experience encourages Fellows to immediately integrate course materials in their classrooms. Nonetheless, considering the fact that the school curriculum does not always accommodate new material, Endeavor Fellows may request an extension to their individualized professional development plan. Mentoring is strong; educators demonstrate very positive experiences.

### Leadership Distinction Elevated to Requirement

Cohort II is the first Cohort to have the requirement of gaining "Leadership Distinction" with their STEM Certificate. This change in the program requirements will increase the opportunity for a multiple of new educators to benefit from the Endeavor Fellows' long-term sustained professional development. It allows for other teachers in a Fellow's school or district to be engaged by the Endeavor Fellow with training in shorter term projects that can be placed in the curriculum to achieve learning goals. The projects encourage the use of NASA assets in the curriculum for 1-2 week periods of time. This is a

professional development experience for many others, offering teachers a taste of STEM pedagogical strategies with NASA content and making a systemic change to curriculum.

### VII. Project Contribution To PART Measures (Include Data Plus Explanation)

Endeavor aligns with the following NASA Education's Outcomes, Objectives and Measures.

### **Outcome II**

Attract and retain students in STEM disciplines through a progression of education opportunities for students, teachers and faculty.

### Objective 2.2 Educator Professional Development – Long Duration

- Cohort I & II plus 5 sponsored Fellows = 85 Endeavor Fellows committed to -
  - completion of 5 online, NASA content focused STEM courses
  - development of an Action Research and Individual Plan for integration of content and best practices in their respective classrooms followed by assessment of student response
  - lead educator workshops and/or systemic efforts on how to integrate this content in current curriculum

### **2.2.1** Percentage of educators who participate in NASA training and use NASA resources in their classroom instruction

- 97% (83 of 85) of Fellows report use of NASA resources in their respective classrooms
- 19 recipient of teaching awards
- 36 received professional promotion in science area and/or are serving on local or state science-related strategic committees.

### 2.2.2 Cost per participant, Endeavor Fellow

• \$6,250/80 participant

### 2.2 Student involvement K-12 Measures

### 2.4.1 Number of elementary and secondary student participants in NASA instructional and enrichment activities.

Metrics below come from Endeavor Fellow self-reported information from April 2010.

8382 students are engaging in NASA content or instructional assets in the classroomdue to direct interactions with Endeavor Fellows

4207 additional students are engaging in NASA content or instructional assets in the classroom, due to interactions with educators who were trained or influenced by Endeavor Fellows.

Endeavor's Fellows are in-service, pre-service and/or alternate-route educators. As Fellows they are required to be actively engaged in a 12-18 month professional development plan designed to improve their personal STEM proficiency, understanding of NASA-related STEM content plan, and use of evidence-based best pedagogical practices. Fellows incorporate 'lessons learned' into their classroom instructional delivery, in informal and formal methods of sharing with colleagues, and in participation on systemic committees at the local, regional and state level.

Evaluation and data collection for Cohorts I and II include independent Endeavor surveys, the number of self-reported recognition awards for teaching excellence, the number of self-reported professional promotion and/or appointment to systemic committees, individual Action Research Plans and reports and exit interviews.

### **III. Project Partners**

By design, Endeavor's partnership with Teachers College, Columbia University has been significant in ensuring rigor of online courses and a high degree of credibility to the issued Certificates in STEM Education. Additionally, this partnership is key in exploring opportunities for publishable, academic research to be conducted with this project.

Significant partners and their role include:

- U.S. Satellite Laboratory, Inc.
  - o Administers and implements the ESTCP
- Teachers College, Columbia University
  - o Awards a NASA Endeavor Certificate in STEM Education
  - o Interactions/involvement of Science Department
  - Teachers College instructors teach majority of online courses
  - Exploring opportunities for academic research based on Endeavor
  - Dr. Felicia Moore-Mensa, Director of the Urban Science Center is a member of the Endeavor Selection Committee (and teacher educator involvement)
  - Exploring a collaboration between Endeavor and the New York City Department of Education
- State Departments of Education (varied levels of application of Endeavor courses to state requirements for credit, certification)
  - o Maine
  - o Florida
  - Virginia
- Higher Education Institutions
  - o Adams State College, Alamosa, Colorado (provides graduate credit)
  - Kentucky State University (teacher educator involvement)
  - Alabama A&M University (teacher educator involvement)
  - o University of West Florida (provides graduate credit towards Masters Degree)
  - Purdue University (course instructor and research partnership)
  - Illinois State University (course instructor and research partnership)
- Selection Committee (8 esteemed educators include retired and active Superintendents, K12 Science Supervisors, Elementary and High School Principals, Professional Development Specialist, Professors)
- School Districts
  - School Districts may sponsor additional Endeavor Fellows

### Appendix A

### **Endeavor Fellow Recognitions, Awards and Promotions**

| Endeavor Fellow 1 (FL)  | 2009 Teacher of the Year in Edward H. White High School .   |
|-------------------------|---|
| Endeavor Fellow 2 (NY)  | Delivered a climate change research project, SPRINTT, to two additional schools outside his own. An enrichment program beyond the school year for students is continuing into next school year with it.   |
| Endeavor Fellow 3 (SD)  | Awarded the Iota Chapter of Delta Kappa Gamma<br>International Society of Women Educator's 2010<br>"Woman of Achievement" Award.  |
| Endeavor Fellow 4 (NJ)  | Received the National Talent Network Wall of Fame Cinnaminson Education Achievement Award.  |
| Endeavor Fellow 5 (OH), | Teacher Astronaut and Teacher of the Year (Milford Junior High); Educator of the Year (Clermont County and Miami Township) and AFA Teacher of the Year (Cincinnati, Ohio). Teaching both Science and Mathematics in 2010-2011.  |
| Endeavor Fellow 6 (FL)  | Credits NASA Endeavor experience as the motivational factor that encouraged her to introduce <i>Engineering Design</i> into her elementary classroom instruction. She and students have entered competitions and received awards.   |
| Endeavor Fellow 7 (IN)  | Named the NES science trainer for the State of Indiana and is a consultant for private science companies with notebooking strategies.   |
| Endeavor Fellow 8 (NY)  | Selected as his school's Teacher of the Year and has introduced a climate change class (SPRINTT) to 6 <sup>th</sup> graders. This summer he taught an Oceans curriculum to K-6 children.  |
| Endeavor Fellow 9 (FL)  | Received recognition for his NASA Endeavor Fellowship activities by Florida Governor Charlie Crist. Nominated for the United States Presidential Award of Excellence In Science Teaching. School District of Hillsborough County Science Teacher of the Year and has received recognition by the School District of Hillsborough County Board of Education. |
| Endeavor Fellow 10 (DC) | Presented at the 2010 P-12 Summit. Received trainer certification for two national professional development programs. Received national   |

|                         | recognition by Jack Hidary, founder of National Lab Day, on Capitol Hill for his role as National Lab Day coordinator for his school; Was interviewed with Kumar A. Garg, Policy Analyst, Office of Science & Technology Policy, Executive Office of the President at the National Lab Day Capitol Hill luncheon. Promoted to position of school district's science teacher mentor. This position is related to the school district's receipt of the Bill & Melinda Gates \$100 million grant for Empowering & Effective Teaching. |
|-------------------------|--|
| Endeavor Fellow 11 (FL) | Received a Brevard Schools Area I Teaching Award. Appointed to the Brevard County Science Cadre whose membership serves as the district's Lead Science Resource Leaders. The Cadre offers Harris Super Science Saturdays, sponsored by the Harris Corporation to students with low-performing achievement in science.  |
| Endeavor Fellow 12 (FL) | A Best Practices Award entrant based upon her<br>Endeavor Action Research Project.   |
| Endeavor Fellow 13 (FL) | Appointed to the school district's Science Leadership team and to the Instructional Plan Writing Team for implementing the state's new science standards.  |
| Endeavor Fellow 14 (FL) | Promoted to Science Enrichment Teacher for grades 2-5 from that of the Computer Enrichment Teacher for K-5.  |
| Endeavor Fellow 15 (NJ) | Recipient of the "You Make A Difference" Award for sharing NASA materials with colleagues.   |
| Endeavor Fellow 16 (DC) | Received Outstanding Teacher, District of Columbia Public Schools. Selected as a Northrop Grumman Weightless Flight of Discovery Teachernaut. Named a Civil Air Patrol Aeronautics Teacher. Serves as her school's Science Co-chair. Initiated a two-day Science Fair, where students exhibit science research projects which are judged by local scientists.  |
| Endeavor Fellow 17 (ME) | Featured as a NASA Endeavor Fellow in the Milken Family Foundation national news booklet.  |
| Endeavor Fellow 18 (CA) | As a result of her Endeavor Fellows experience, is consulting and sharing K-12 STEM education to private, charter and public schools.  |
| Endeavor Fellow 19 (CA) | As a result of his Endeavor Fellows experience, is a STEM education consultant to educators and  |

|                         | school administrators.  |
|-------------------------|---|
| Endeavor Fellow 20 (IN) | Participating on Purdue University School of Engineering grant writing team for an NSF proposal.  |
| Endeavor Fellow 21 (MA) | Teaching in a brand new engineering program at the school through 13 new learning lab stations.   |
| Endeavor Fellow 22 (MN) | Listed in Who's Who Among America's Teachers  |
| Endeavor Fellow 23 (NY) | Career change from classroom to K-7 science teacher in a self-sustaining greenhouse.  |
| Endeavor Fellow 24 (TX) | Mentor in a middle school STEM enrichment program.  |
| Endeavor Fellow 25 (MN) | Teaching a class comprised primarily of NASA Design Challenge during the 2010-2011 school year.   |
| Endeavor Fellow 26 (GA) | -Co-Chair of Early Childhood Generalist Standards Committee, National Professional Board of Teaching Standards Recipient of a Horace Mann Fellowship, an Exxon Mickenson Science Scholarship, an NEA Student Achievement Grant, a GE Bulbs Grant, and a Lowe's Toolbox Grant. |
| Endeavor Fellow 27 (CT) | Received an Award for Excellence in Middle School Teaching, Connecticut Science Teachers Association. Coached a student who is a National winner of the NSTA/Toshiba Exploravision competition.   |
| Endeavor Fellow 28 (MD) | Career Applied to teach gifted and talented so I can institute more of the NASA Endeavor Content into the curriculum.   |
| Endeavor Fellow 29 (NJ) | Received a Toyota Mini Grant. Was accepted into<br>Honeywell's Advanced Space Academy. Is a NJ<br>Solar System Ambassador   |
| Endeavor Fellow 30 (FL) | Nominee for Florida Governor's Award of Teaching Excellence. Received ETS Recognition of Excellence. Career change, accepted position of Colorado 5 <sup>th</sup> grade teacher in the first International Baccalaureate Elementary School in North America.                  |
| Endeavor Fellow 31 (NH) | Promoted to teacher of 5 <sup>th</sup> grade due to her Endeavor training.  |
| Endeavor Fellow 32 (NY) | Recipient of the Teacher of the Year Prize, Teachers Insurance Plan. Selected as an NEA Green Prize National Finalist.  |
| Endeavor Fellow 33 (CA) | Panel member for the California Space Education and Workforce Institute and a panel member at   |

|                          | the California Space Authority conference on STEM              |
|--------------------------|--|
|                          | education in California. Encouraged by her                     |
|                          | Endeavor Fellows experience, she has applied to                |
|                          | teach science methods in a teacher education                   |
|                          | program "  |
| Endeavor Fellow 34 (AR)  | Will be teaching pre-AP classes in 2010-2011                   |
|                          | academic year.   |
| Endeavor Fellow 35 (PA)  | Named a collaborative, 5 <sup>th</sup> grade special education |
|                          | teacher for the purpose of sharing and integrating             |
|                          | Endeavor information with Endeavor with                        |
|                          | colleagues.  |
| Endeavor Fellow 36 (FL)  | Received approximately \$9,000 in grants.                      |
| , ,                      | Accepted as an Earthwatch Educator Fellow.                     |
| Endeavor Fellow 37 (AL)  | Recipient of a Honeywell Educator Space Academy                |
|                          | Scholarship and a UAB Education Scholarship.                   |
| Endeavor Fellow 38 (FL)  | Selected as an Earthwatch Fellow.; Received                    |
| Endeavor renow so (i 2)  | recognition of his Endeavor Fellowship; by the                 |
|                          | School Board. Member of the Florida Department                 |
|                          | of Education's Office of Mathematics and Science               |
|                          | Advisory Board.  |
| Endeavor Fellow 39 (NE)  | Promoted as a special duty assignment as the                   |
| Lindeavoi Tellow 39 (NL) | school's High Ability Coordinator.                             |
| Endeavor Fellow 40 (NY)  | Serves on the planning team for a new NYC public               |
| Endeavor Fellow 40 (NY)  | middle school. Is the school's coordinator of                  |
|                          |  |
| 5 de 2 5 de 44 (NE)      | interdisciplinary investigations.                              |
| Endeavor Fellow 41 (NE)  | Focuses on Engineering and Design Process                      |
|                          | activities that can be integrated into the school's            |
|                          | curriculum. Team sponsor for the MOONBOTS                      |
|                          | Challenge.   |
| Endeavor Fellow 42 (WI)  | Promoted to Middle School Science Department                   |
|                          | Head.  |
| Endeavor Fellow 43 (WA)  | Recognition as an Endeavor Fellow and Mentor                   |
|                          | received at the Washington State Science Spring                |
|                          | Conference   |